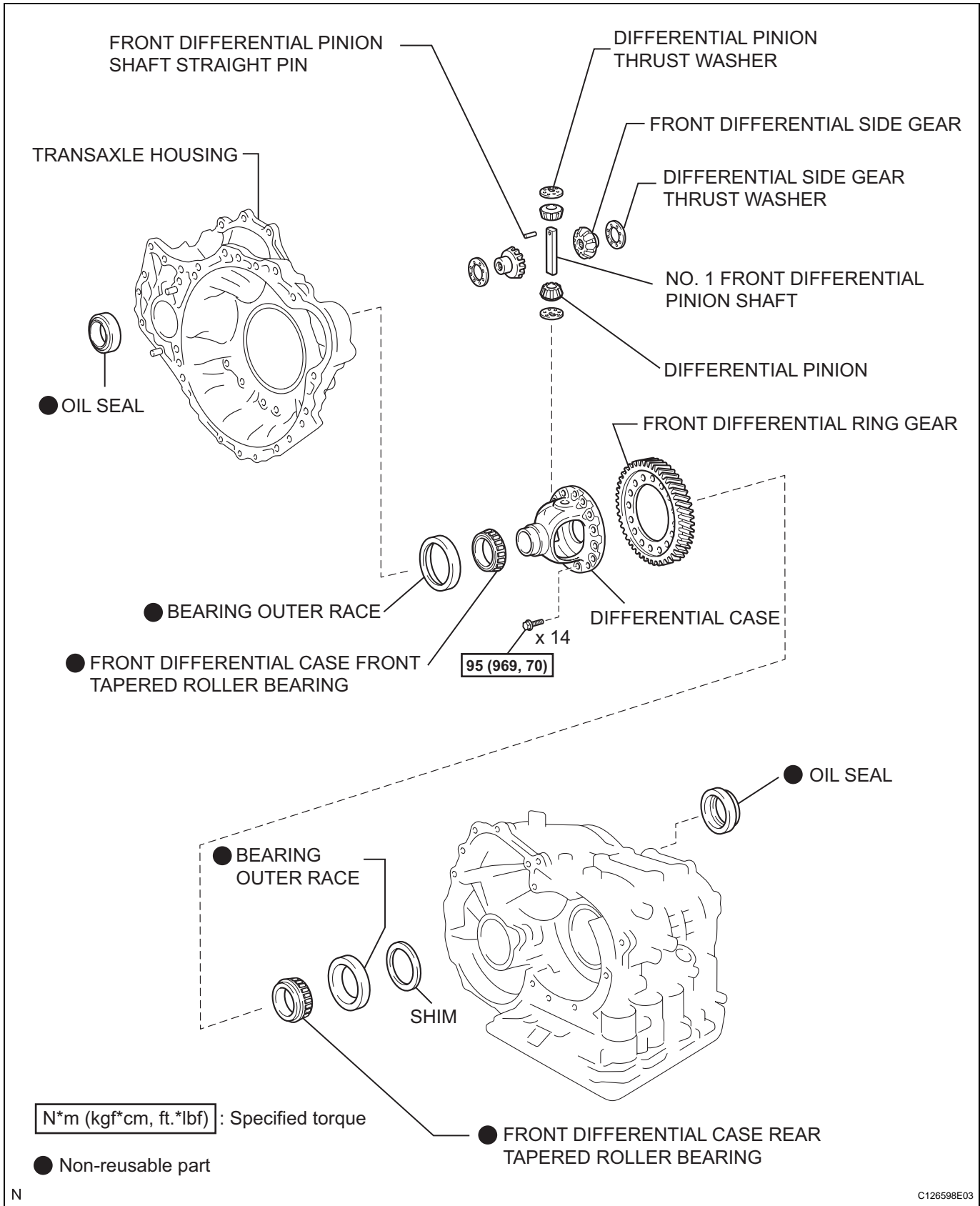


DIFFERENTIAL CASE

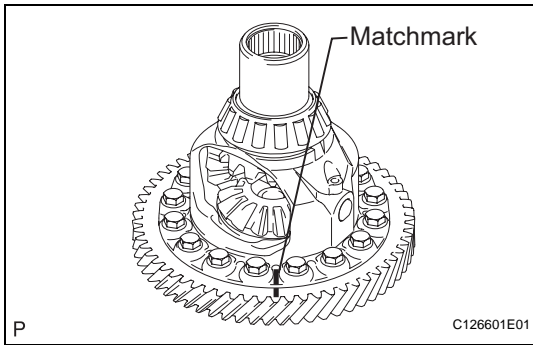
COMPONENTS



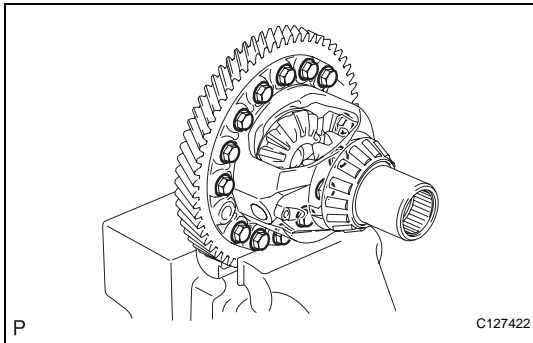
DISASSEMBLY

1. REMOVE FRONT DIFFERENTIAL RING GEAR

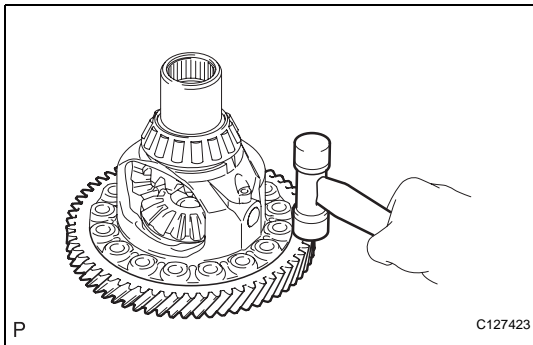
- (a) Place the matchmarks on the ring gear and differential case.



- (b) Remove the 14 bolts.



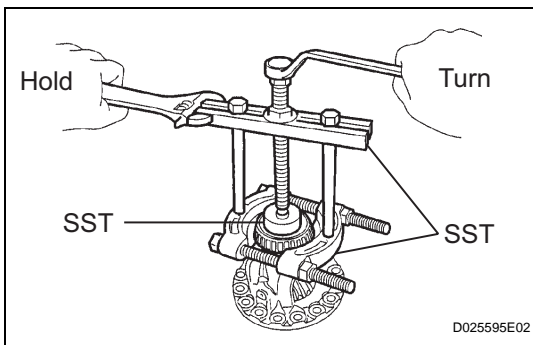
- (c) Using a plastic-faced hammer, tap on the ring gear to remove it from the case.



2. REMOVE FRONT DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING

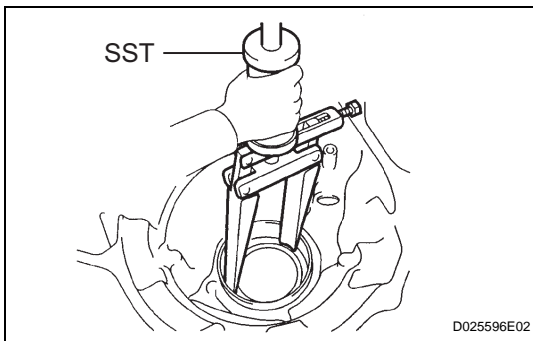
- (a) Using SST, tap out the front differential case front tapered roller bearing from the differential case.

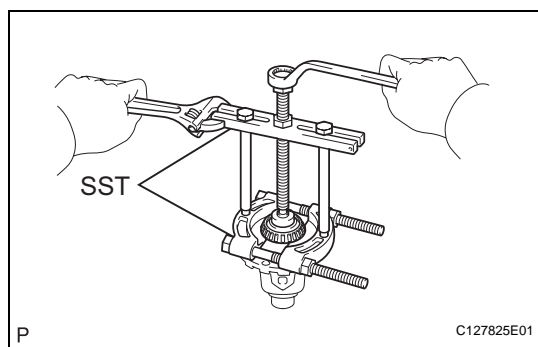
SST 09950-00020, 09950-00030, 09950-60010 (09951-00500)



- (b) Using SST, remove the front differential case front tapered roller bearing outer race.

SST 09308-00010

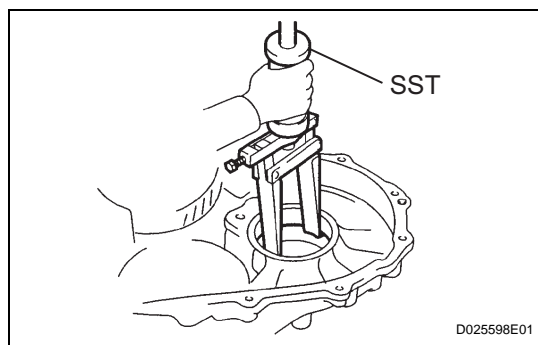




3. REMOVE FRONT DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING

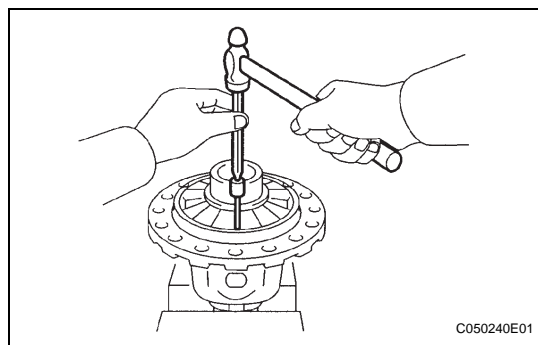
- (a) Using SST, remove the front differential case rear tapered roller bearing from the differential case.

SST 09950-00020, 09950-00030, 09950-60010 (09951-00500)



- (b) Using SST, tap out the front differential case front tapered roller bearing outer race.

SST 09308-00010

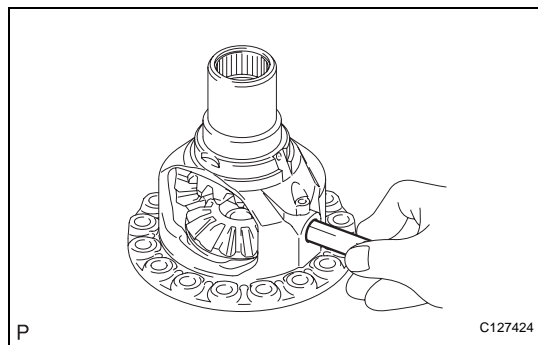


4. REMOVE FRONT DIFFERENTIAL PINION SHAFT STRAIGHT PIN

- (a) Using a pin punch and hammer, tap in the straight pin.

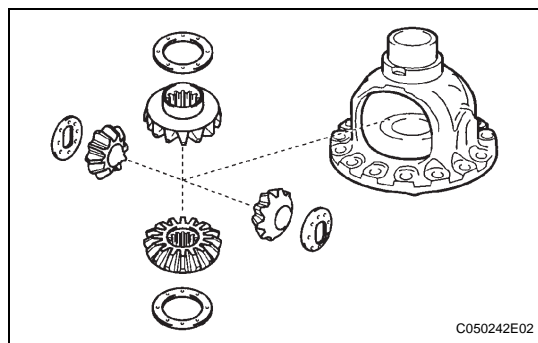
NOTICE:

Before removing the straight pin, unstake it with a pin punch.



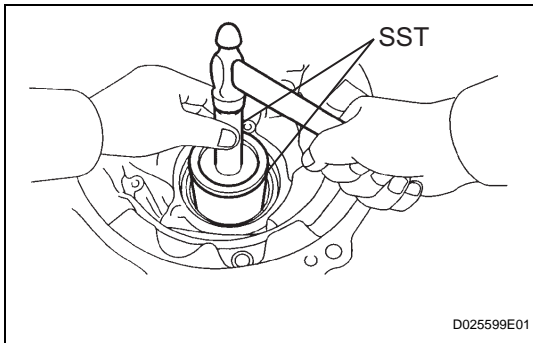
5. REMOVE NO. 1 FRONT DIFFERENTIAL PINION SHAFT

- (a) Remove the front differential pinion shaft from the differential case.



6. REMOVE FRONT DIFFERENTIAL SIDE GEAR

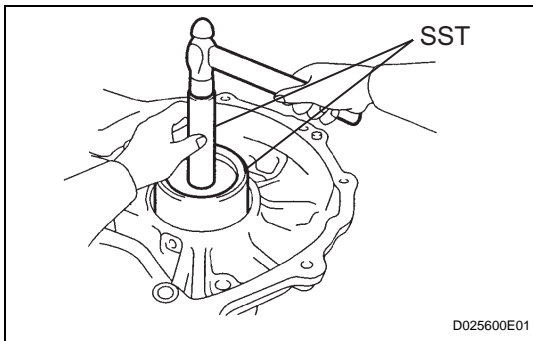
- (a) Remove the 2 front differential pinions, 2 pinion thrust washers, 2 front differential side gears and 2 side gear thrust washers from the differential case.



7. REMOVE TRANSAXLE HOUSING OIL SEAL

- (a) Using SST and hammer, tap out the oil seal.

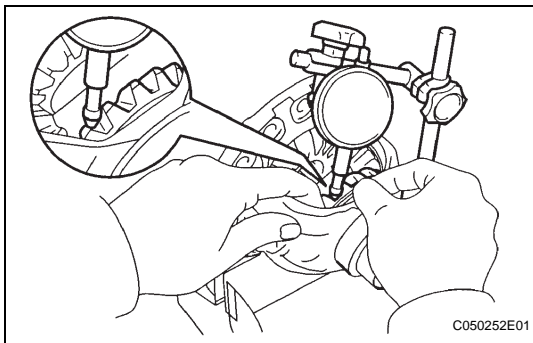
SST 09950-70010 (09951-07100), 09215-00013 (09215-00471)



8. REMOVE DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

- (a) Using SST and hammer, tap out the oil seal.

SST 09950-70010 (09951-07100), 09608-10010



INSPECTION

1. INSPECT DIFFERENTIAL SIDE GEAR BACKLASH

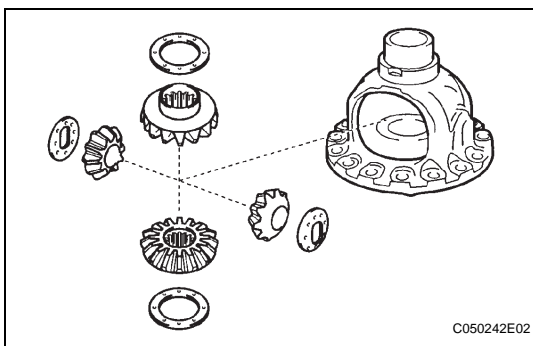
- (a) Using a dial indicator, measure the backlash of the side gear.

Standard backlash:

0.05 to 0.20 mm (0.0020 to 0.0070 in.)

Standard thrust washer thickness

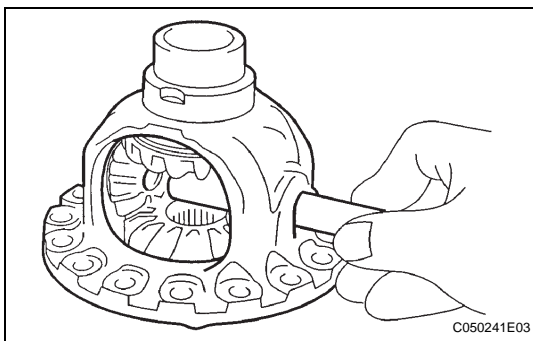
Thickness	Thickness
1.625 mm (0.0640 in.)	1.825 mm (0.0719 in.)
1.725 mm (0.0679 in.)	-



REASSEMBLY

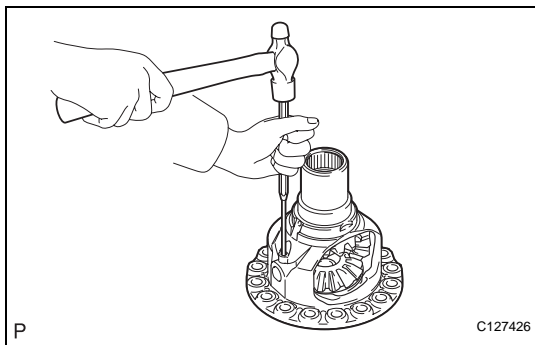
1. INSTALL FRONT DIFFERENTIAL SIDE GEAR

- (a) Coat the 2 front differential side gears, 2 side gear thrust washers, 2 front differential pinions and 2 pinion thrust washers with ATF and install them to the differential case.



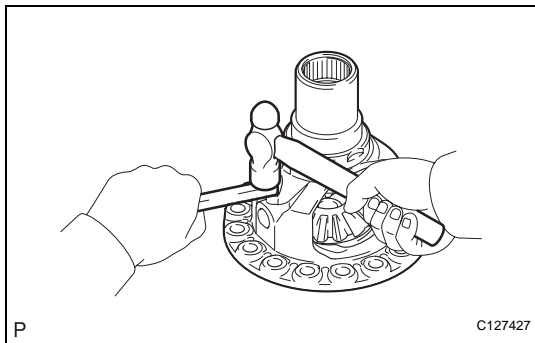
2. INSTALL NO. 1 FRONT DIFFERENTIAL PINION SHAFT

- (a) Coat the No. 1 front differential pinion shaft with ATF, and install it to the differential case.



3. INSTALL TRANSAXLE CASE STRAIGHT PIN

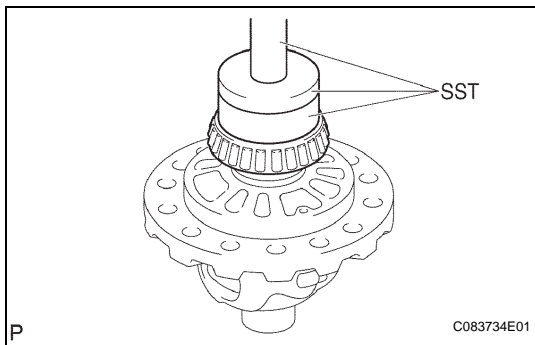
- (a) Using a pin punch and a hammer, tap in the pinion shaft straight pin.



- (b) Using a chisel and a hammer, stake the differential case.

NOTICE:

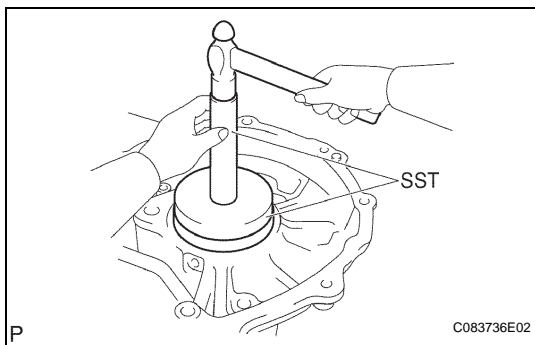
Stake it after adjusting the backlash.



4. INSTALL FRONT DIFFERENTIAL CASE REAR TAPERED ROLLER BEARING

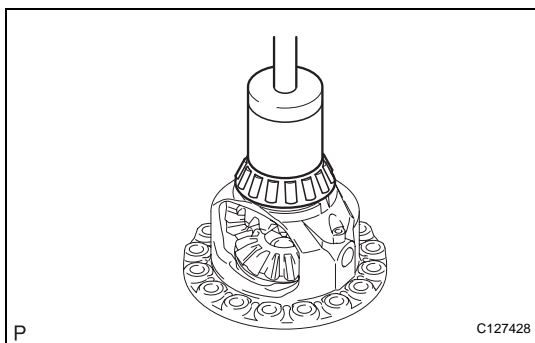
- (a) Using SST and a press, press in the front differential case rear tapered roller bearing to the differential case.

SST 09550-60010, 09950-60020 (09951-00680), 09950-70010 (09951-07100)



- (b) Using SST and a hammer, tap in the front differential case tapered roller bearing front outer race to the transaxle housing.

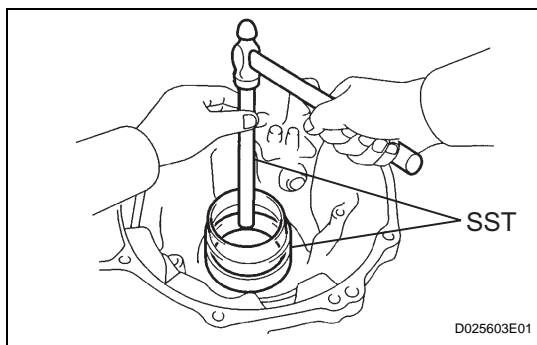
SST 09550-60010, 09950-60020 (09951-00680), 09950-70010 (09951-07100, 09951-00890)



5. INSTALL FRONT DIFFERENTIAL CASE FRONT TAPERED ROLLER BEARING

- (a) Using SST and a press, press in the front differential case front tapered roller bearing to the differential case.

SST 09550-60010, 09950-60020 (09951-00680), 09950-70010 (09951-07100, 09951-00890)

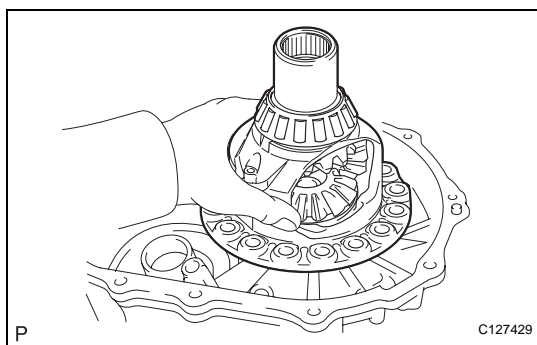


- (b) Using SST and a hammer, tap in the front differential case tapered roller bearing front outer race to the transaxle housing.

SST 09550-60010, 09950-60020 (09951-00680),
09950-70010 (09951-07100, 09951-00890)

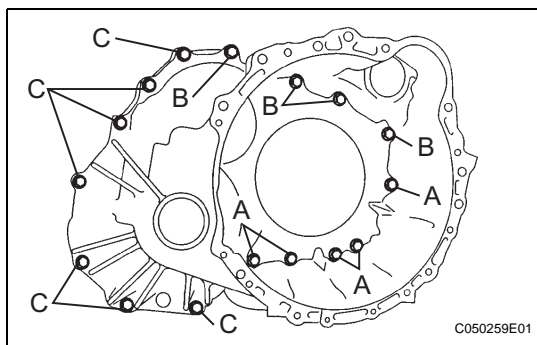
NOTICE:

Clearance is not allowed between the bearing and transaxle housing.



6. ADJUST DIFFERENTIAL SIDE BEARING PRELOAD

- (a) Install the differential assembly to the transaxle case.



- (b) Clean the matching surfaces of the transaxle case and transaxle housing.
(c) Install the transaxle housing to the transaxle case and tighten them with the 16 bolts

Torque: 22 N*m (224 kgf*cm, 16 ft.*lbf) for bolt A
29 N*m (296 kgf*cm, 21 ft.*lbf) for bolts B and C

HINT:

Each bolt length is indicated below.

Bolt length:

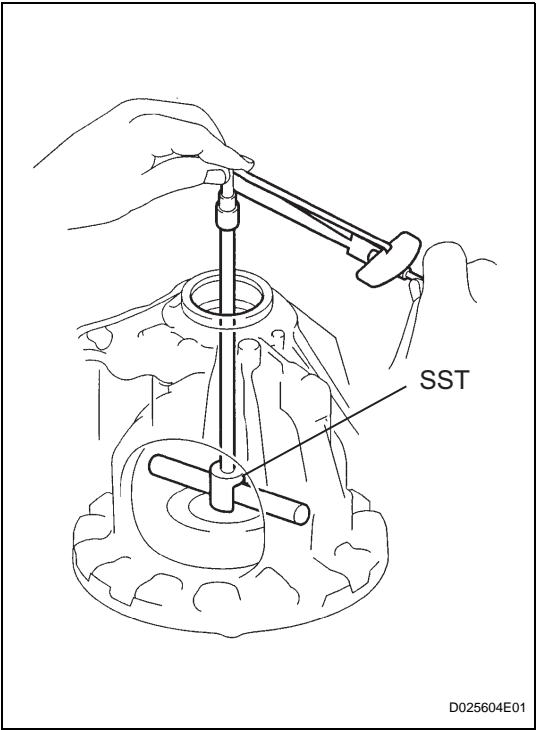
50 mm (1.969 in.) for bolt A

50 m (1.969 in.) for bolt B

42 mm (1.654 in.) for bolt C

NOTICE:

Usually, bolt A is non-reusable bolt. In this case, however, it can be used after cleaning it.



- (d) Using SST, return the differential assembly right and left 2 or 3 times to allow the bearing settle.

SST 09564-32011

- (e) Using SST and torque wrench, measure the turning torque of the differential.

SST 09564-32011

Torque: Standard turning torque at 60 rpm
0.20 to 0.69 N*m (2.0 to 7.0 kgf*cm, 1.8 to 6.1 in.*lbf)

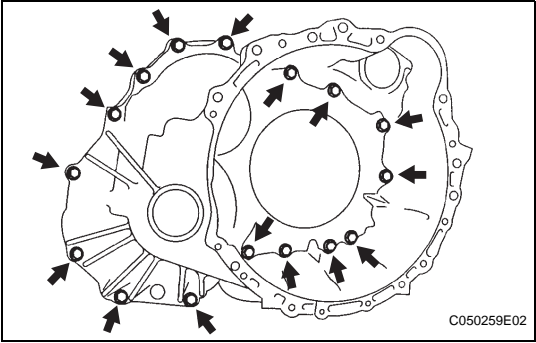
HINT:

If the turning torque is not within the specified value, refer to the table below and select a thrust washer which turning torque is within the specified value.

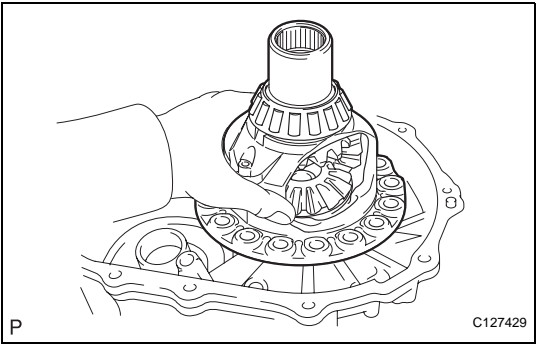
Standard flange thickness

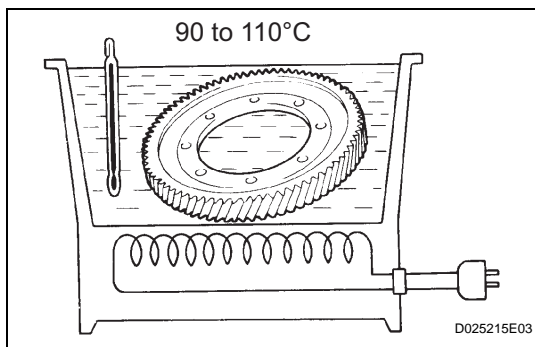
Mark	Thickness	Mark	Thickness
0	2.00 mm (0.0787 in.)	9	2.45 mm (0.0965 in.)
1	2.05 mm (0.0807 in.)	A	2.50 mm (0.0984 in.)
2	2.10 mm (0.0827 in.)	B	2.55 mm (0.1004 in.)
3	2.15 mm (0.0846 in.)	C	2.60 mm (0.1024 in.)
4	2.20 mm (0.0866 in.)	D	2.65 mm (1.1043 in.)
5	2.25 mm (0.0886 in.)	E	2.70 mm (0.1063 in.)
6	2.30 mm (0.0906 in.)	F	2.75 mm (0.1083 in.)
7	2.35 mm (0.0925 in.)	G	2.80 mm (0.1102 in.)
8	2.40 mm (0.0945 in.)	H	2.85 mm (0.1122 in.)

- (f) Remove the 16 bolts and the transaxle housing.



- (g) Remove the differential assembly.





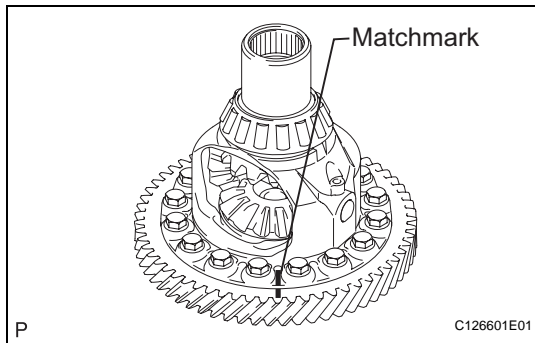
7. INSTALL FRONT DIFFERENTIAL RING GEAR

- (a) Using ATF and a heater, heat the front differential ring gear to 90 to 110 °C (194.0 to 230.0 °F)

NOTICE:

Do not overheat the ring gear to 110°C (230.0°F) or more.

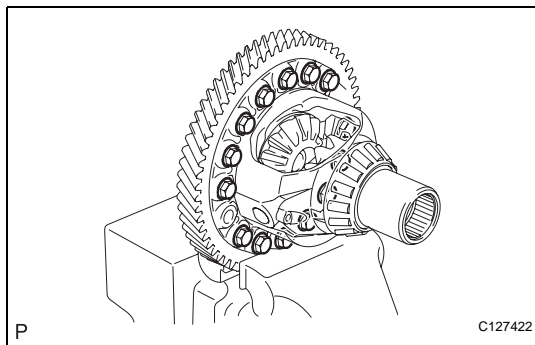
- (b) Clean the contact surface of the front differential case.



- (c) Align the matchmarks, and install the front differential ring gear case quickly.

NOTICE:

Do not install the bolts while the ring gear is hot.

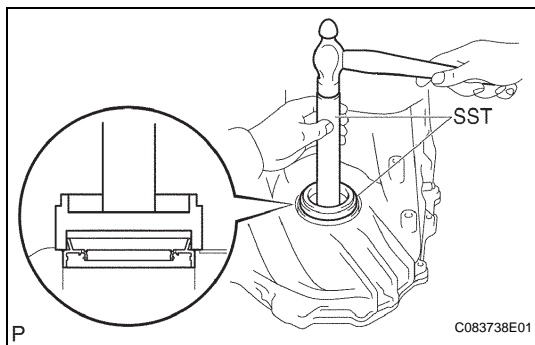


- (d) Tighten the 14 bolts.

Torque: 95 N*m (969 kgf*cm, 70 ft.*lbf)

NOTICE:

Tighten the bolts a little at a time in diagonal order.

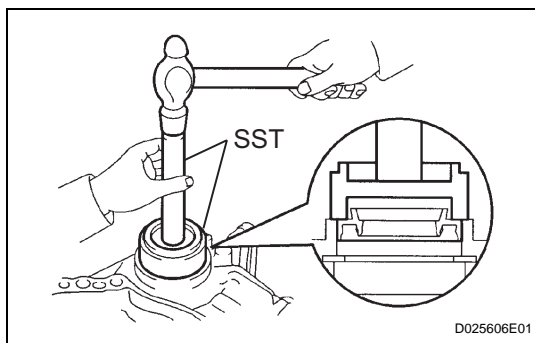


8. INSTALL DIFFERENTIAL SIDE BEARING RETAINER OIL SEAL

- (a) Coat the lip of a new oil seal with a little amount of MP grease.

- (b) Using SST and a hammer, tap in the oil seal.

SST 09223-15020, 09950-70010 (09951-07100)



9. REMOVE TRANSAXLE HOUSING OIL SEAL

- (a) Coat the lip of a new oil seal with a little amount of MP grease.

- (b) Using SST and a hammer, tap in the oil seal.

SST 09710-30050, 09950-70010 (09951-07100)